

# Notice of Allowability

Application No.

09/286,575

Examiner

Andrew C. Flanders

Applicant(s)

PACKARD, THOMAS N.

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to The amendment filed 9 February 2005.
2. ☒ The allowed claim(s) is/are 34-52 and 54-73.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 2/28/07
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

89

## DETAILED ACTION

### *Examiners Amendment*

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Packard on 09 September 2005.

The application has been amended as follows:

Please amend **Claim 34** to read:

A noise reduction system connected to at least two input channels for receiving input signals that have substantially identical program content but differing instantaneous noise transients, whereby the system selects the input signal that has the lowest instantaneous noise transient level, the system comprising:

at least two low frequency attenuators, a low frequency attenuator connected to each of the at least two input channels for equally attenuating input signals whose frequencies are below a predetermined frequency threshold for providing attenuated input signals;

a switcher coupled to the low frequency attenuators for transmitting the attenuated input signal that has the least amount of instantaneous transient noise as a transmitted signal;

and a low frequency restorer configured to mix the transmitted signal from the switcher with an inverse signal derived from the input signals for providing a mixed signal whose frequencies are not attenuated with respect to the input signals.

Please amend **Claim 47** to read:

A system for reducing noise in an input signal, including a blanker configured to remove instantaneous transient noise that is present in the input signal, a continuous noise suppressor coupled to the output terminal of the blanker and configured to remove noise from the program component of the blanker output signal,

the blanker comprising:

a filter for subdividing the frequencies included in the input signal into at least two ranges of frequency signals to provide at least two filter signals;

a noise detector coupled to each of the at least two filter signals and configured to detect instantaneous transient noise as an instantaneous level of signal that is greater than the average signal level by a predetermined proportion to the average level in the respective filter signal;

a switch coupled to each detector to provide the respective filter signal to a blanker output terminal when transient noise is not detected by the respective detector, and to deny filter signal to the output terminal whose amplitude is greater than the

Art Unit: 2644

average signal level by a predetermined proportional amount, when transient noise is detected by the respective detector.

the continuous noise suppressor comprising:

a differentiating stage coupled to the blanker output configured to detect a noise component in the blanker output signal and to produce a differentiated output signal;

a signal detector coupled to the blanker output configured to detect the program component of the blanker output signal and to produce a program component signal;

a divider stage configured to divide either the differentiated output signal or the program component signal by the other to generate a ratio signal;

a variable filter having a variable cut-off frequency responsive to the ratio signal to filter frequencies from the blanker output signal in accordance with the selected cut-off frequency.

Please amend **Claims 54, 55, 56, 58, 60, 61 and 62** to depend upon claim 47.

Please amend **Claim 63** to read:

A continuous noise suppressor configured to remove a noise component from the program component of an input signal, the continuous noise suppressor comprising:

a differentiating stage configured to detect a noise component in the input signal and to produce a differentiated output signal;

a detector coupled to the input signal to detect the program component and to produce a program component signal;

Art Unit: 2644

a divider stage configured to divide either the differentiated output signal or the program component signal by the other to produce a ratio signal;

a filter having a cut-off frequency responsive to the ratio signal to filter frequencies from the input signal in accordance with the selected cut-off frequency.

Please cancel Claim 53.

***Allowable Subject Matter***

Claims 34 –52 and 54 – 73 are allowed.

***Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are unreadable and lack legends. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Conclusion***

Art Unit: 2644


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

acf



VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600